

1301 Pennsylvania Avenue, NW
Suite 403
Washington, DC 20004-1701
USA

Telephone 202 628 8421
Fax 202 628 8424
E-mail:oitp@alawash.org

Office for Information
Technology Policy

ALA American Library Association

April 4, 1997

Irene M. Flannery
Attorney
Federal Communications Commission
2100 M Street, NW
8th Floor
Washington, DC 20554

RECEIVED
APR 4 1997
Federal Communications Commission
Office of Secretary

Re: Ex Parte Presentation
CC Docket No: 96-45, Federal-State Joint Board on Universal Service

Dear Ms. Flannery:

Below is the information you requested regarding calculation of poverty levels for library outlets. The ALA *ex partes* of January 10, 1997 and March 17, 1997 demonstrated how tables for library universal service discounts could be constructed. The tables were based on a random sample of 500 library outlets.

Three source files were used to construct these tables:

- 1) Data on the location of public library outlets from the Department of Education, National Center for Education Statistics (NCES). This data is collected every year from state library agencies who have agreed on the data to be collected and what the data represents. NCES 1994 Public Release Files data, the latest year for which data was available were used. The sample chosen was a random sample of library outlets, from the outlet file. The complete file can be found at the NCES Web site at gopher://gopher.ed.gov:10000/11/data/library/public/library94. The elements used in the ALA analysis included the library's unique identifier code, location address and zip code information, and the name of the library.
- 2) The second file used was the U.S. Census 1990 Summary Tape File 3A. This file contains 1989 data on the total number of people within each census tract as well as the number of people at or below the poverty level within that tract.

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- 3) Finally, a digital map of all the census tracts within the United States was built from U.S. Bureau of the Census TIGER files. The unique identifier for each census tract from the TIGER files was then linked to the corresponding census tract identifier (and the data associated with that census tract) from the Summary Tape File 3A. The net result is a digital map showing by census tract the number of people in poverty throughout all regions of the U.S.

Analysis was performed by the Institute of Science and Public Affairs at the Florida Resources and Environmental Analysis Center using Caliper Corporation's Maptitude Geographic Information System (GIS) software. The street address and zip code information data for each library was sent to Qualitative Marketing Software of Clearwater, Florida for geocoding. Qualitative Marketing Software took the street address or zip code data and came up with the most accurate longitude and latitude for each library outlet in our sample. This geocoded information was incorporated into Maptitude to generate a one mile radius circle around each library outlet in the sample. Using Maptitude each one-mile radius circle was overlaid on top of the digital map depicting poverty distribution throughout the U.S. by census tracts.

Maptitude was then used to sum up the number of people within each circle as well as the number of people at or below poverty level within each circle. If partial tracts were included within the circle, Maptitude weighted those tracts appropriately in its calculations. This provided a set of data listing the total number of residents and the total number of residents living at or below the poverty level within a one-mile radius of each library outlet in the sample by metropolitan status code as well as urban versus rural location.

This data was then exported to a Microsoft Excel spreadsheet to calculate the number of outlets that had given levels of poverty within a 1-mile radius of their geographic location. The library universal service discount tables submitted by ALA in its January 10, 1997 and March 17, 1997 *ex partes* were designed to follow the equitable distribution of universal discounts called for in the Joint Board Recommendation at paragraph 555. Following the distribution of universal service discounts in the matrix in paragraph 555 of the Joint Board Recommendation should obviate the need for recalculating residential poverty data to set up library universal service discount distributions based on residents within 185% of the poverty level as has been suggested by some respondents.

According to the Economics and Statistics Administration, U.S. Department of Commerce, a poverty area is defined as a "census tracts or block numbering areas (BNA's) where at least 20 percent of residents were poor in 1989" and an "extreme poverty area" is an area where "40 percent or more of residents were poor."¹

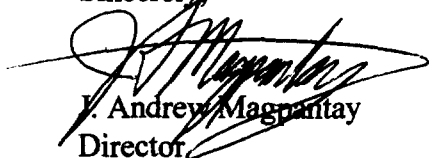
¹Census tracts are small, statistical subdivisions of a county (or statistically equivalent entity). They usually have between 2,500 and 8,000 residents and **do not cross county boundaries**. (Emphasis added). All metropolitan counties are subdivided into census tracts. BNA's are subdivisions of the many non metropolitan counties where local census committees have not established census tracts. BNA's are comparable to census tracts in population. These definitions, as well as the ones for poverty area and extreme poverty area were taken from U.S. Census Bureau, Office of Statistics, Statistical Brief, Poverty Areas, revised, September 23, 1996 which can be

I have included a list and graph of the distribution of all libraries in our sample based on residential poverty level (Attachments 1 and 2, respectively) along with our library universal service discount tables from our March 17, 1997 *ex parte* which was based on this sample (Attachment 3).

ALA has discussed with the Institute of Science and Public Affairs the feasibility of running a similar analysis for all 15,904 stationary public library outlets and has begun the process of running this analysis which is expected to be completed by the end of May 1997. ALA will make this information available to libraries and the fund administrator when the analysis is completed.

Please feel free to contact me if you have questions about any of this material.

Sincerely,



J. Andrew Maganitay
Director

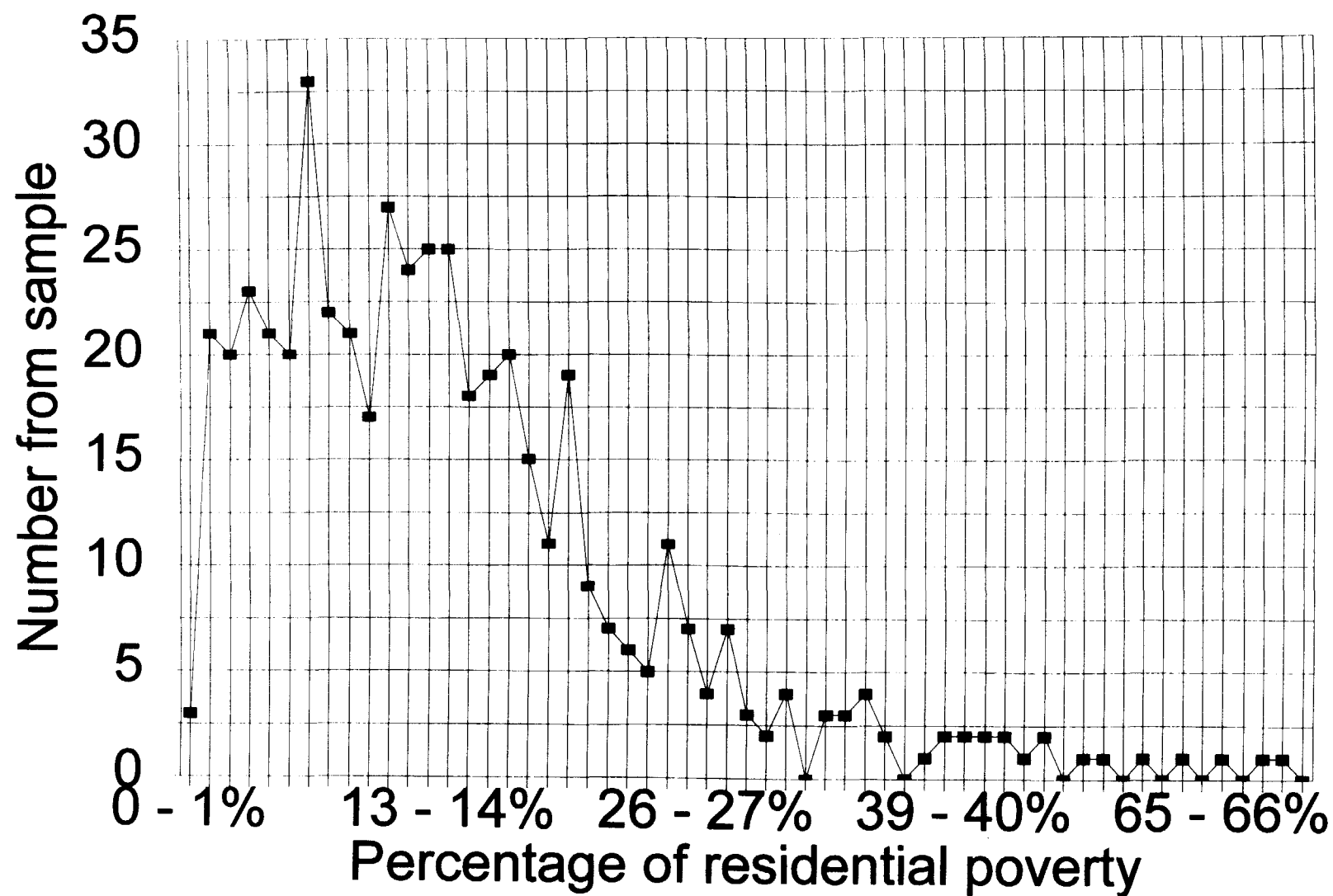
Office for Information Technology Policy
American Library Association

CC: William Caton
Acting Secretary
Federal Communications Commission

Table 1 - Library Outlet Sample Distribution by Percentage of Poverty

1	2	3
Percentage of poverty within a 1-mile radius of library outlet	Number of library outlets in sample	Percentage of library outlet sample
0 - 1%	3	0.60%
1 - 2%	21	4.20%
2 - 3%	20	4.00%
3 - 4%	23	4.60%
4 - 5%	21	4.20%
5 - 6%	20	4.00%
6 - 7%	33	6.60%
7 - 8%	22	4.40%
8 - 9%	21	4.20%
9 - 10%	17	3.40%
10 - 11%	27	5.40%
11 - 12%	24	4.80%
12 - 13%	25	5.00%
13 - 14%	25	5.00%
14 - 15%	18	3.60%
15 - 16%	19	3.80%
16 - 17%	20	4.00%
17 - 18%	15	3.00%
18 - 19%	11	2.20%
19 - 20%	19	3.80%
20 - 21%	9	1.80%
21 - 22%	7	1.40%
22 - 23%	6	1.20%
23 - 24%	5	1.00%
24 - 25%	11	2.20%
25 - 26%	7	1.40%
26 - 27%	4	0.80%
27 - 28%	7	1.40%
28 - 29%	3	0.60%
29 - 30%	2	0.40%
30 - 31%	4	0.80%
31 - 32%	0	0.00%
32 - 33%	3	0.60%
33 - 34%	3	0.60%
34 - 35%	4	0.80%
35 - 36%	2	0.40%
36 - 37%	0	0.00%
37 - 38%	1	0.20%
38 - 39%	2	0.40%
39 - 40%	2	0.40%
40 - 41%	2	0.40%
41 - 42%	2	0.40%
42 - 43%	1	0.20%
43 - 44%	2	0.40%
44 - 46%	0	0.00%
46 - 47%	1	0.20%
47 - 48%	1	0.20%
48 - 51%	0	0.00%
51 - 52%	1	0.20%
52 - 63%	0	0.00%
63 - 64%	1	0.20%
64 - 65%	0	0.00%
65 - 66%	1	0.20%
66 - 76%	0	0.00%
76 - 77%	1	0.20%
77 - 78%	1	0.20%
78 - 100%	0	0.00%
Total	500	100.00%

Distribution of sample library outlets



Sample Tables for Library Low Income Discount

ALA has taken a sample of library outlets, which may be a main or branch library facility, from the most recently available National Center for Education Statistics (NCES) data which reflects public library data for 1993. Table 1 shows the sample size and the percentage of library outlets falling inside and outside metropolitan areas.

Table 1

	Total Number	Percentage
Number of Library Outlets in Sample	500	100.00%
Library Outlets in Metropolitan Areas	239	47.80%
Library Outlets in Non-Metropolitan Areas	261	52.20%

Table 2 shows how this sample was matched against 1990 U.S. Census poverty data. Column A shows the percentage of poverty residents within a 1-mile radius of library outlet. This 1-mile radius serves as an approximation for a library outlet's service area. Column B shows the percentage of the sample in each category. The break points for Column A were specifically designed to approximate the distributions of schools in the chart referred to in the Recommended Decision in paragraph 555. Column C represents the percent discount category corresponding to each poverty range. Columns D and E represent the number of library outlets in metropolitan and non-metropolitan areas respectively, for each of these poverty ranges.

Table 2

Percentage Poverty Within 1-Mile Radius of Library Outlet

	A	B	C	D	E
	Percentage of Poverty Residents Within 1 Miles Radius of Library Outlet	Percentage of Library Outlets from Sample in Each Poverty Category	Percentage Discount Category	Percentage of Sampled Library Outlets in Metropolitan Areas in Each Poverty Category	Percentage of Sampled Library Outlet in Non-Metropolitan Areas in Each Product Category
1	0-3%	3.00%	20	7.53%	1.15%
2	3-9%	30.70%	40	37.66%	22.99%
3	9-13%	19.00%	50	17.57%	22.22%
4	13-16%	15.00%	60	8.79%	18.39%
5	16-22%	16.00%	80	10.46%	20.69%
6	22-100%	16.30%	90	17.99%	14.56%
7	Total Percent	100.00%		100.00%	100.00%

Using this or a similarly constructed table as the index, libraries would self-certify the poverty level within their service area in order to receive the corresponding discount in Column C. For example, if a library system self-certified that within its service area, 15% of its residents were poverty residents, the library system would qualify for a 60% discount. If another library system self-certified that within its service area 7% of its residents were poverty residents, that library would qualify for a 40% discount.